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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,454	01/12/2006	Yosuke Ishikawa	108426-00059	4923
4372	7590	09/28/2007		
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			EXAMINER HOANG, JOHNNY H	
			ART UNIT 3747	PAPER NUMBER
			NOTIFICATION DATE 09/28/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com  
IPMatters@arentfox.com  
Patent\_Mail@arentfox.com

## Office Action Summary

Application No.

10/528,454

Applicant(s)

ISHIKAWA ET AL.

Examiner

Johnny H. Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25,30,32 and 34 is/are rejected.
- 7) ☒ Claim(s) 26-29,31,33 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/18/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Inventorship*

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### *Claim Objections*

2. Claims 26-29, 31, 33, and 35 are objected to because of the following informalities:

Claim 26, "The electronic control unit as claimed in claim 1" must be changed to –The electronic control unit as claimed in claim 25--.

Claims 27-28, "The electronic control unit as claimed in claim 2" must be changed to –The electronic control unit as claimed in claim 26--.

Claim 29, "The electronic control unit as claimed in claim 4" must be changed to –The electronic control unit as claimed in claim 28--.

Claim 31, "The electronic control unit as claimed in claim 6" must be changed to –The electronic control unit as claimed in claim 30--.

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Claim 33, "The electronic control unit as claimed in claim 8" must be changed to –The electronic control unit as claimed in claim 32--.

Claim 35, "The electronic control unit as claimed in claim 10" must be changed to –The electronic control unit as claimed in claim 34--. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 25, 30, 32, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishida (US 5,947,083).

Re claim 25, Ishida discloses an ECU (unit 15, Fig. 1), crank angle sensor (unit 13, Fig. 1) for detecting an engine speed, temperature sensor (unit 9, Fig. 1) for detecting the temperature of the engine, and an oxygen sensor (unit 21, Fig. 1) for detecting an air/fuel ratio of engine. Also note col. 3, line 10 through col. 5, line 9 and figures 2-5, which describes the calculation of ignition timing value of the engine by using the correction term proportional to a controlled variable [engine speed signal from crank angle sensor (unit 13, Fig. 1)] and a correction term proportional to an integration of differences between said controlled variable and a designed value [the temperature of engine from temperature sensor (unit 9, Fig. 1) or the air/fuel ratio of engine from the oxygen sensor (unit 21, Fig. 1)].

The system of claim 30, and the method of claim 32 are rejected the same reasons as claim 25 above.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida.

Ishida discloses claimed invention except for the utilization of the computer program, but rather uses the electronic control unit for processing the engine system. It would have been obvious to one of ordinary skill in the art to include a computer program (which applicants are placed on official notice that it is well known in the art to include computer program in the electronic control unit) instead of disclosing the ECU has to include the computer program. Furthermore, applicants are also placed on official notice that calculating an ignition timing value are known techniques of the uses of the ECU and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the ECU of Ishida that includes the computer program for calculating the ignition timing value of the engine.

***Allowable Subject Matter***

7. Claims 26-29, 31, 33, and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**Conclusion**

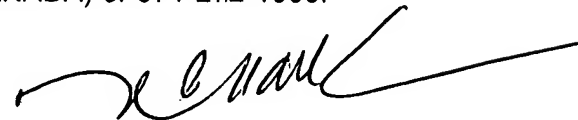
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference has been cited as art of interest to show other system using the electronic control unit for calculating the ignition timing values.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnny H. Hoang whose telephone number is (571) 272-4843.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen K. Cronin can be reached on (571) 272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JHH  
September 24, 2007



Johnny H. Hoang  
Examiner  
Art Unit 3747